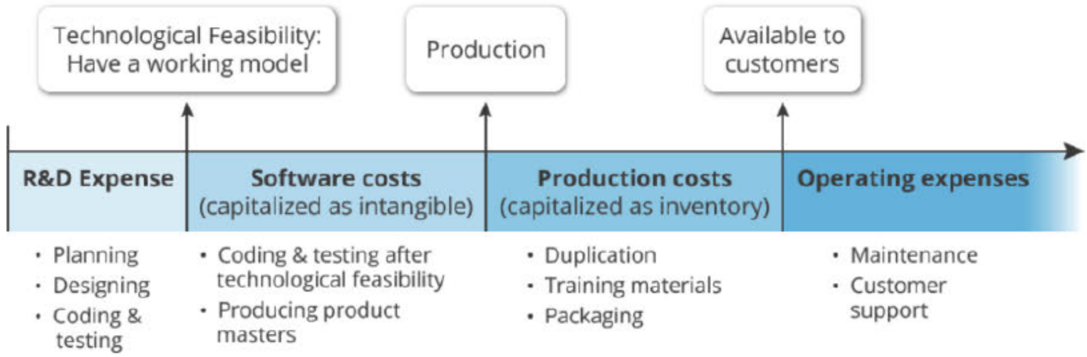
# 8.03 Computer Software Costs & Other Assets

## Costs to Develop Computer Software to Sell, Lease or Market

In the case of computer software developed to sell, lease or market as a product, these costs associated with converting a technologically feasible program into final commercial form are **capitalized** (ASC 985).

- Costs **prior** to **technological feasibility** are **expensed** as research and development (R&D).
- Costs incurred **after** software **sales** begin are inventoried and included in **cost of sales**.




**Amortization** of capitalized software costs, which is **charged to cost of sales**, is calculated using a two-step process:

1. Amortization is calculated using the more conservative of **straight-line** and the **relative sales value approach**; that is, the **larger** of the two amounts will be recognized as amortization expense:
   - The *straight-line* amount is calculated by *dividing* the remaining *carrying value by* the remaining *useful life,* as of the beginning of the period.
   - The amount under the *relative sales value approach* is calculated by establishing a ratio with the current period's sales in the numerator and the total estimated sales for the remaining life of the software, including the current period's sales, in the denominator. Amortization is equal to the *ratio multiplied by* the *carrying value* of the software as of the beginning of the period.

$$\frac{\text{Current period's sales}}{\text{Current period's sales + Estimated future sales}}$$

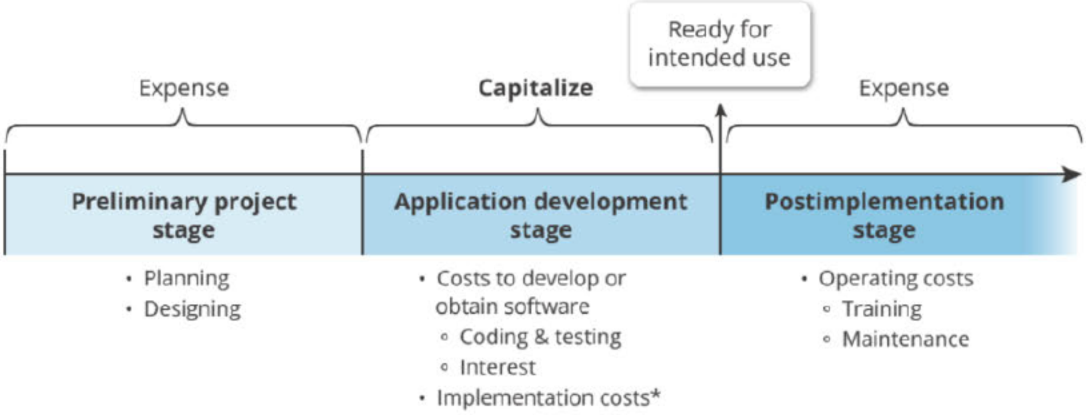
2. The new **carrying value** of the software, **after amortization** from Step 1, is **compared to** the **net realizable value (NRV)** of the software. If the carrying value is greater, the **excess** is also **written off** as amortization expense. For purposes of this calculation, the *NRV* of the software *is* the amount expected to be generated from *future sales less* the costs associated with *completion, disposal, maintenance, and customer support.*

Example:

- 5-year useful life
- S/L = 1/5 = 20%
- Ratio = 100 revenue / 400 expected total revenue = 25%
- Amortization will be 25% of carrying value.
- If new carrying value is $285 and NRV is $240, write off extra $45 amortization expense.

## Software Developed for Internal Use Only

- If computer software is developed for internal use only, costs incurred in the **preliminary project stage** and costs incurred in training, data conversion, reengineering and maintenance should be **expensed**.
- Costs incurred during the **application development stage** and for **upgrades** and **enhancements** should be **capitalized** and amortized on a straight-line basis.
- Capitalization of costs should cease when the software project is substantially complete and ready for its intended use (ie, **postimplementation stage** costs should be **expensed**).
- If the entity later decides to market the software to outsiders, net proceeds received should be applied first to the carrying amount of the software until it reaches zero, then recognized as revenue.




**Capitalized implementation costs do not include costs for training, data conversion, reengineering, and maintenance; these costs must be expensed.*

## Cloud Computing Arrangements

When an entity enters a cloud computing arrangement (aka, hosting arrangement), an analysis is performed to determine whether some or all of the arrangement represents a software license:

- If the entire arrangement is considered a **software license**, the entire cost, including the present value of future payments, is treated as an intangible and accounted for similar to

other licenses. It will be **capitalized**, and a determination will be made as to whether or not it has a finite useful life.

- If the arrangement does not include a software license, the entire amount is treated as a **service contract** with the **expense** recognized in the period in which the benefit is derived.
  - Note, however, that **implementation costs** (ie, implementation, setup and other upfront costs) incurred during the **application development phase** for such service contracts are **capitalized** depending on the nature of the costs. This does not include costs for *training, data conversion, reengineering, and maintenance*; these costs must be *expensed* (ie, same treatment as internal-use software).
- If the arrangement represents a *combination*, the total cost will be *allocated* between the software license and the service contract.